

the RARS ~~Exciter~~

Raleigh Amateur Radio Society



Worldwide Friendship

April 2000

Number 354

The Crowd Groaned...

A non-ham had won the Grand Prize, an Icom 706 transceiver, at the 1997 **RARSfest**. Maybe a few people worried about "bootlegging," but that wasn't the real problem. It's just that it's nice if a prize like that goes to a licensed ham. You just feel better.

Cheer up - this story has a happy ending. That winner, Bill Powell, had been attending **RARSfests** for over 20 years, but had never seriously considered getting a ham license. Now, he's AF4JG. Bill had been working on RF design at ITT Mackay Marine, but the prize spurred him on to getting his ham license. Today Bill works on multi-GHz fiber optic multiplexer systems at Alcatel.



AF4JG with his Grand Prize Icom 706

On the air, he makes do with stealth dipoles in his antenna-restricted neighborhood. Bill also says "I really enjoy the wide depth of various interest groups in this hobby - particularly RARS, TAPR (Tuscon Amateur Packet Radio), and SARA (Society of Amateur Radio Astronomers). I've made it to one Field Day (RARS the year before last), which was terrific and a great experience. I went to Dayton for the first time last year (WOW), came home with a car load of stuff, and plan to go again next year." Bill also served on the RARS 2000 committee. ■

Sunday, April 9th
RARSFest 2000
North Carolina State
ARRL Convention

OUR LAST REMINDER!

We need lots of volunteers for the RARSfest! If you haven't contacted one of the committee chairs, please call one now and sign up for a job (or two).

For each two-hour shift, you'll earn a ticket for the **DJ-S11 HT giveaway**. And members of the Security detail will qualify for an extra prize, a battery/power supply combo.

THANKS! - Cyndi KD4ACW and Tim KF4RTX

Next RARS Meeting:
Tuesday, April 4th
Special VE Test Session

RARSfest COMMITTEE CHAIRMEN

Setup	Bernard Blackmon W4BRB 467-8719, bernardb@mindspring.com
Stage	Gary Pearce KN4AQ 380-9944, kn4aq@arrrl.net
Tickets	Bill Cole KG4CXY 469-0785, kg4cxy@arrrl.net
Comm Center	David Fix N4YTO 677-8320, dfix@pagesz.net
Teardown	Dave Thomas K4SAN 772-6338, k4san@ipass.net
RARS Table	Max Bloodworth KO4TV 787-0758, ko4tv@juno.com
Social	Mary Jo Littlewood 872-6555
Contests	Rick Merkle KA3PSK 835-0970, ramerk@us.ibm.com
Security	Ron Ford KG4FJA 772-9127, rjford@mindspring.com

The Exciter

The **Exciter** is the monthly newsletter of the Raleigh Amateur Radio Society. It is available in both printed and electronic form. The printed version is mailed to members just before each club meeting. The electronic form, in Adobe Acrobat PDF format, is e-mailed about a week earlier.

We solicit both articles and advertising. The deadline for submissions is the 15th of the prior month. Contact the Editor.

The views contained in the Exciter are those of the individual authors, and are not necessarily the views of the Editor, or the Raleigh Amateur Radio Society.

The Raleigh Amateur Radio Society

The Raleigh Amateur Radio Society, Inc. (RARS), was founded in 1969 and continues to serve and support the Amateur Radio community in the greater Triangle area. In 1999, RARS reincorporated and obtained 501(c)(3) Non-Profit tax status.

The objectives of the club are to promote worldwide friendship through Amateur Radio; to be of public service by providing radio communications in times of disaster, emergency, or civic need; to educate members in radio technique; and to provide training classes to assist in obtaining Amateur Radio licenses.

Anyone interested in Amateur Radio is eligible to apply for membership. Dues for regular licensed amateurs are \$18.00 per year (from July 1 through June 30). Additional immediate family members pay \$5.00 each per year. Dues for licensed amateurs older than 59 or younger than 16 are \$12.00 per year. Dues for non-licensed Associate members are \$9.00 per year.

Applications for membership may be obtained from the treasurer, or the RARS web site (www.rars.org).

Officers

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Gary Pearce KN4AQ
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Info

Repeaters:

145.13
146.64
224.64
444.525 (88.5 PL)
444.95 (88.5 PL)

Web Site:

<http://www.rars.org>

President's Corner

Jack Ritter WØUCE

Akihabra

For centuries mankind has made pilgrimages to holy places, searched for the fountain of youth and made special effort to visit famous locations. It has been written that your ham radio career is not complete until you visit the two major ham radio locations in the world – The Dayton Hamfest, and Akihabra, Japan. Akihabra is the one place to see, feel and touch the latest and greatest ham gear on display all in one location.

While I have yet to make it to Dayton, I always enjoy visiting Akihabara and make it a point to “kick the tires” every time I go to Tokyo. My first visit was in 1957, and while in Tokyo this March I just had to do it again. While the gear and faces have changed, the same feeling comes over me as I enter this magic area where shops no bigger than a dining room table offer every type of screw, nut, bolt, switch, connector, panel, antenna, radio, component and accessory imaginable. One stall sells nothing but U Bolts, another only offers knobs, etc., etc. You could spend a week in Akihabra and never see it all.

There used to be eight or ten large ham radio stores there, but much like the US, consolidation has taken place in Japan. The largest remaining ham store is Rocket Radio, the “Mecca of Ham Gear.” If it is made for retail sale, you can see it at Rocket.

This trip had special meaning as I ran into an old friend, Bill KH6FGA, during a business meeting in Tokyo. Bill and I go back to 1973 when we worked international airport HF Radio projects together; we still see each other now and then as our paths cross in Hong Kong, Tokyo, Kuala Lumpur or other Asian DX locations. We too have changed, both have more gray hair and don't walk quite as fast as we use to, but we had to make the “Akihabra pilgrimage” one more time as it was my last day in Tokyo before heading to VK land.

I hope you enjoy the tour of Rocket Radio as much as I did.

73, Jack WØUCE

SWL/Scanner Report

Kelly Mills AE4FG

The Scanner/SWL SIG meeting was held on March 20th, 16 people attended.

The 13th Winter SWL Festival in Kulpsville, PA was discussed, and a presentation of the new IBM radio system was given. Other topics included the planning of our **May 20th SWL listening event at Jordan Lake**, and a **July visit to the NC State Highway Patrol dispatch center**.

Our next meeting is April 17th. Be sure to check into the 9:00 Monday night nets for more information. ■

Photo Tour of Japan's ROCKET RADIO

photos by W0UCE



The exterior of the ROCKET RADIO store in Akihabra



The VHF/UHF Handheld department



The antenna department



A local ham "kicks the tires" at a wall of HF transceivers



And the boatanchors. It's not all Japanese equipment - there's a rack of Collins standing in the corner



It's not all radio - Jack's photo montage included this shot of the Sydney Opera House, in Australia. And somewhere along the line, we imagine Jack got some work done. This wasn't a vacation, after all!

Batteries In The Hamshack – Part 1

Jeff Wittich AC4ZO

The Anatomy of the Battery

Ever since I was a small boy, I liked to know what was inside stuff and what makes things work. Bobbie always said that it's a wonder I haven't taken my nose apart to see what makes it run. I guess many of us are like that... after all, it's one of the traits that led us to this hobby. Fortunately, I never had access to a lead-acid battery before I understood the hazards facing a "Curious George" with such a thing on the bench. But now, having been exposed to them in a safe manner at work, I can tell you what's inside.

First, just a little terminology that will keep popping up in the articles:

Cell A container with positive and negative electrodes (plates) and electrolyte in it. Part of a battery. Produces about 2 volts.

Battery A group of cells connected in series, often 6 (to make a 12 volt unit).

Electrolyte A mixture of sulfuric acid, water, and sometimes other stuff. Also called "acid."

Jar The container that the battery is made in. Usually plastic or rubber.

Most lead acid batteries have the same general components in them: A bunch of *positive plates*, *negative plates*, *separators*, and *electrolyte* (acid). The plates are made of a *grid* with stuff spread on them. The grid is made of mostly lead, and looks like a waffle... sort of. Since pure lead is too soft to stand up under it's own weight when it's shaped like a waffle, it has mixed in it another material to stiffen it. Antimony and calcium are two popular materials. Antimony is generally cheaper, but calcium is generally better. These plates are then "pasted," that is, covered with a pasty substance. The positive plates are pasted with lead dioxide and are black in color, and the negative plate uses sponge lead and is gray. Sponge lead is stuff that has the same chemical properties as lead, but is spreadable. The plates are mostly rectangular but with a "tab" which makes one corner taller than the others.

These plates are then stacked into a container, called the *jar*, alternating positive and negative, with a separator between each. There can be anywhere from 2 to about 100 plates in one *cell*. The positive plates are all connected together by placing a rod across their tabs. Lead is melted and used to make the connection between the tab and the rod. The negative plates have been arranged so that their tabs are on the opposite side of the jar, so that they can be connected in the same fashion as the positive plates, but not short out with the positive plates. A cover is then put on the jar, and the posts (terminals) are connected

to the bars connecting the plates.

Now, let me mention that lead acid batteries can be grouped into three categories by construction and purpose. There is the *automotive starting battery*, sometimes called *SLI* (starting/lighting/ignition). Then, there's the *Traction* battery that you are probably familiar with but may not know it. And lastly, the *Stationary* battery.

The car (SLI) battery needs to be able to supply very high current for a short period of time... maybe 5 or 10 seconds, and then immediately recharged. To accomplish this, the battery has a high number of very thin plates. This gives it lots of surface area where the chemical reaction that produces the current takes place. They are not intended to be discharged more than about 10 percent, and if they are discharged more they will not last long. They are not good choices for ham radio applications, unless kept continuously on charge and used only as a "ballast."

The traction battery has thicker (but fewer) plates and a more rugged separator that makes them less sensitive to physical shock and vibration. They are manufactured for use in RVs, boats, golf carts, and electric fork lifts. Deep cycle marine trolling motor batteries are of this type. The deep cycle refers to the fact that it can be discharged nearly fully with no damage. And indeed, these batteries are intended to be nearly fully discharge each day, and recharged over night. When properly maintained, they usually last about 5 years. Most of the "gel cells" we see at hamfests are of this type, and they are well suited for ham radio applications. They are road-ready and just the thing for public service events.

Stationary batteries, as indicated by their name, are not intended to be bounced down a highway. They are typically large, heavy, and unwieldy. They have very thick plates, and a life of up to 20 years when properly maintained. Storage batteries are designed for standby service, and are kept fully charged until needed. They can handle deep discharge with no damage, but should be recharged as soon as possible after discharge. For the shack, these are the best choice for standby power, but they are not readily available, and they are expensive.

Each of these categories of batteries is available in flooded, or immobilized electrolyte. Sometimes, an actual "gel cell" can be found but they are rare. Most of the batteries we call gel-cells are actually not. More on this later.

A flooded cell is filled with sulfuric acid. Liquid. Nasty and stinky, and not to be touched by human hands. They will spill if knocked over, and are capable of making quite a mess. A gel-cell is indeed sealed. The acid is thickened by the addition of silica and becomes immobile. The batteries that most of us use in our ham radio applications are of the *absorbed glass mat* (AGM) technology. They are also called *valve regulated lead acid* (VRLA) in industry. The acid is immobilized in pads that look like sponges covered with medical gauze. These pads (mats) are placed between the plates, and must have good contact

BATTERIES *continued from previous page*

with the plate for the battery to work. The space above, below, and around the edges of the plates is just empty. The battery cover has little vents that open if any pressure builds up inside the jar. In any lead acid battery, the process of charging converts some of the water in the electrolyte to hydrogen and oxygen gasses. In a flooded cell, we don't worry about it, just add water. In a VRLA cell, we worry about it. The mat is designed to allow charging with as little *gassing* as possible, but some still happens. The gasses are released through the vents, and the cell develops a deficiency of water. Dehydration is one of the failure modes of the VRLA cell. VRLA batteries can safely be transported by car, truck, or mule with no danger of spillage.

There are other advantages and disadvantages to each design. In a flooded cell, the acid moves around, so the battery benefits from the acid between, above, below, and around the plates. That's a lot of capacity compared to the gel-cell and AGM which only makes use of the acid between the plates. But the typical VRLA cell gasses less than one percent as much as a comparable flooded cell, so they are safe for use in the living quarters of a house, where a flooded cell is not.

That's about all I can think of to say about what's inside a lead acid battery. Next month we'll look at failure modes, and what kind of testing we should be doing to keep our batteries at top performance.

CONTINUED..... next month

Books Finally Closed on RARS Repeater Move

Bernard Blackmon W4BRB

The RARS 146.64 repeater has been back on the air for almost a year, and the 224.64 and 444.525 machines have been up since last October. Now it's almost as though they were never down. But it was just last month that all the paperwork was completed, all the bills paid, and checks deposited. I'm pleased to report that in the end, the entire project didn't cost the club a dime. All expenses were paid by the NCDOT, because it was all due to the loss of the "Bayleaf" tower, demolished to make way for the new North Wake Expressway.

But before closing the final chapter, I want to say thanks again to all the people who helped get the repeaters moved and on the air again, most of them working behind the scenes:

1. The crew that went to the old repeater site and removed the equipment Sunday evening after RARSFest 1998.
2. Danny Musten KD4RAA for his initial work on replacement equipment for 146.640 repeater, starting the process needed to secure the current location for

W2BYV Resigns Wake EC, RARS Public Service Posts

Matt Sickles W2BYV announced his resignation from his positions as Wake County ARES Emergency Coordinator, and RARS Public Service Director. In a bulletin posted on area mailing lists, Matt said:

I have decided to go back to school to obtain a BS in Business Administration and then follow-up by obtaining my Masters in Business Administration. This decision will allow me to pursue some career opportunities that I have been presented with.

During this three year program I will have to trade-in some free time that was spent with amateur radio for time with my family. Family always comes first in a decision of this magnitude.

I would like to thank all members of the Wake County amateur community who helped me out during the weather and disaster events over the past year. Your help and advice helped me get through a rough initiation.

I am planning on staying an active amateur operator in my drive-time and other free time, but will yield the planning and co-ordination to someone who has a lot more free time than I do at this juncture. As my time permits I will always offer to work at the Wake EOC, State EOC and any shelter that needs assistance. This is a priority I have and others should as well.

So, if you are interested in being the new Wake EC I suggest you contact one of the following persons:

KE4JHJ - Dave - NC SEC
ke4jhj@aol.com

W4CC - John - NC SM
w4cc@arrl.net

Thank you again for all of your support in ARES and amateur radio.

Best regards,
Matt W2BYV

the 146.640 repeater, and providing space for the temporary 64 machine and now the 145.13 machine.

3. Reed Whitten AB4W for working with the State to secure permission to use the current location of the 146.640 repeater.
4. Jeff Wittich AC4ZO for looking up and verifying historical information needed for the support documentation required for the site request forms.
5. Bill Lyon N4CAR who made several trips to the Bayleaf site to meet with CP&L and BellSouth.
6. Bill Lyon and Fred Decker N4IXL for teaching themselves how to setup, program, and install the new repeater controllers that we now use, and for their ongoing support of the repeaters.
7. Elmo Yancey for getting the new building installed at Bayleaf, and Frank Scaraglino KA2FWC for helping Elmo with getting the building ready for occupancy.
8. David Fix N4YTO for dealing with CP&L and BellSouth

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Field Day Tips: You're a DUPE!

It looks like our biggest needs now are **Band Captains for 80CW and Digital**. There's also plenty of opportunity to sign up for bonus points. Check the box.

*Jeff Wittich AC4ZO
Field Day Chairman*

This month, I'd like to review two areas of operating technique. To some of you, this is old hat. But to others, it may be more useful, so here goes.

RUN, or SEARCH and POUNCE?

There's generally two ways to operate Field Day. If you've never done it before, you may want to ease into it by using a method called *Search and Pounce*. This is where you tune around the band, and when you find someone calling "CQ Field Day," you answer him by saying your call (*Whiskey Four Delta Whiskey*). He will repeat your call and give you some information that will need to be logged. It's their station *class* and their *location*. You respond by giving your station class and location, then continue tuning around the band and do it all over again. And again.

The other way, is to *Run* stations on one frequency. To do this, you're the guy staying on a frequency and the people who are tuning around find you and answer your CQ call. It's a little tougher to do, but you generally make more contacts that way. An experienced operator on a good band can usually search and pounce about 30 contacts per hour, but can run about 50. Your mileage may vary.

You're a DUPE!

A word about **dupes**: The computers we use to log the contacts will notify you immediately if the station you are working is already in the log. This is called a *dupe* (duplicate). My suggestion is work them again anyway and don't

This beautiful Field Day 2000 pin is available now from the ARRL. Notice that the tower is leaning a little - just like at Field Day!



even mention the fact that they're a dupe. The reason I say this is that we need to be in their log, and we must not be, or else they wouldn't be calling us.

So just work them, and log them again, and I'll clean the logs after the event. If you feel a dire urge to let them know their a dupe, then do this:

Add the word "again" after you give the exchange. So instead of saying "Seven Alpha North Carolina" (class and location), you would say "Seven Alpha North Carolina *again*." If he knows what you're talking about, you've told him he's already in the log and may have mis-logged us. If he doesn't know what you're talking about, then it doesn't matter anyway. ***Under no circumstances should you refuse to work a dupe.***

The other side of the coin is when you call someone and he tells you you're a dupe (not a dope). This can be very frustrating. Sometimes if you

ask for the exchange anyway, they won't give it to you but rather give you the useless data of what "time" you worked them. This can happen because they worked W5DW and logged it as W4DW, or it might be that an earlier operator worked them and mis-logged their call. In any case, if they refuse to give you the exchange the way to handle it is to simply tell them "OK, but you're not in my log."

Unless they're very inexperienced and have no guidance, they will quickly figure out that they need to be in our log and give you an exchange without further ado.

Next month, we'll start looking at check-lists for station and personal equipment to bring. Till then, 73. ■

BAND CAPTAINS:		BONUS POINTS:	
10 and 15 meter CW and Phone	K4HF, W4IK	Emergency Power	(SEE BELOW)
20 CW	AC4ZO	Natural Power	(OPEN)
20 Phone	N4IXL	Satellite	(OPEN)
40 CW	N4HAF	Publicity	(OPEN)
40 Phone	WA4BPJ	Message Relay	KG4CXY
80 CW	(OPEN)	Message to Section Manager	KG4CXY
80 Phone	KN4AQ	W1AW Message	(OPEN)
Digital	(OPEN)	APRS Demo	W2BYV
Novice/Tech	W2BYV		
VHF	N1GMV		
OTHER IMPORTANT STUFF:			
Chef	(OPEN) (KF4HQS would like to help, but does not want to lead the effort)		

Repeaters continued from page 5

issues, and being very responsive to the financial needs for the entire project.

9. Dan Atchison N3ND and Wireless Communications for relocating the two repeaters at Bayleaf, supplying time and resources above and beyond the contract requirements, and Dan's patience as I dealt with the bureaucratic red tape required to move paper work through the DOT.

10. Danny Hampton K4ITL for his help securing the Blue

Ridge Road tower, and his help in the acquisition and installation of the new equipment at this site.

11. Gary Pearce KN4AQ for having faith in me and giving me the latitude to run this project. For his support in seeing that the many forms were turned around in an efficient manner so as to not slow the project down. ■

[and many thanks to you, Bernard for so many hours spent overseeing this project, keeping everything on track and pushing the paperwork through. Enjoy the machines - KN4AQ]

Club Meeting Minutes

March, 2000

The regular meeting of the Raleigh Amateur Radio Society was held on March 7, 2000 at the Forest Hills Baptist Church on Clark Avenue.

Since it was the annual Birthday Party, cake and ice cream were served, and the meeting was called to order at 7:40p by Vice President Tim Nicholson, KF4RTX.

David N4YTO gave the treasurers report. After listing the balance of the various accounts, he said a few words about why RARS maintains a cash reserve.

Jeff AC4ZO announced the RARS Field Day operation for 2000, and answered questions from the membership.

Cyndi KD4ACW said a few words about the Rarsfest scheduled for April 9. She had tickets for sale, and showed two incentive prizes that will be given away to volunteers who work the event.

Bernard W4BRB addressed the repeater situation. He said that the move project is complete and all outstanding bills have been paid. He described much of what was involved in the project, and named the individuals who contributed to the effort. (Applause)

Thomas KF4JKQ announced Skywarn spotter training scheduled for Tuesday March 28 at 7:00p at the Red Cross House in Durham.

Chuck K4HF announced that Mary Jo (Littlewood) will be coordinating the hamfest social this year. Volunteers were asked to contact her directly.

At this point, the program for the evening was introduced at 8:08. Since the Awards presentation preparation was not complete, the RARS 2000 Committee gave their report. The presentation was made by Bob, KG4FIO, and was completed at 8:45.

Several other announcements were made:

Bernard W4BRB commented on the State Fair operation last Fall. In the post-mortem meeting, there were no communications issues, and the Red Cross passed along their thanks for a job well done.

Gary KN4AQ listed the Public Service opportunities coming up this Spring.

Door prizes went to N4VQN, KD4ISC, and KG4FIJ.

The meeting adjourned at 8:54p.

Jeff Wittich AC4ZO, Secretary

spirited discussion took place concerning the difficulty with securing volunteers for public service activities. The discussion resulted in two action items: W2BYV and KF4RDP will work together to beef up the public service area of the web page, and KG4FIO by virtue of his position with the RARS 2000 committee was asked to investigate why we as a club can't support public service events.

KF4RDP gave the Webmasters activity report. He said that he has been bringing the page back to active status after his extended absence. The site is receiving about 200 hit per week, but the members only area has stalled out. There is also a new experimental forum area for discussions.

KF4CXR reported on Membership Services. She said that the membership card project is going well, with more than 75 cards made, and about 54 picked up so far.

At this point, the President asked the Treasurer to prepare a short description of the various accounts to explain to the membership how the club's finances are handled.

KF4RTX reported on the Financial Review Committee. He distributed their report, and 3 items were added to the New Business schedule of the agenda.

KG4FIO said that the RARS 2000 committee is prepared to report to the General membership at the March meeting. A few general comments were made about their findings.

New Business:

An item concerning the policy for the acquisition of assets was discussed. The purpose of the item was to prevent the donation of useless equipment to the club for the purpose of obtaining tax deductions. After discussion, an action item was assigned to N4YTO to contact Warren Bradley CPA to evaluate our exposure in the area of donations and receipts. The Secretary was directed to carry the item to the March agenda.

An item was heard concerning the frequency of Board meetings. After a small amount of discussion, the item was disposed of without action.

The issue of Club Bylaws came up. The item came about as a result of our new Corporation. The discussion resulted in two action items: N4YTO was asked to contact Warren Bradley CPA about amendments to the Articles Of Incorporation, and KF4RTX was asked to investigate and report on the propriety of certain Committee Chairs being Board positions.

At this point, a few simple topics were covered. KO4QH announced that there will not be a Spring Technician class this year. W0UCE commented briefly of Public Service Preparedness in response to an agenda item which had been removed earlier in the meeting.

On motion by AC4ZO, seconded by N4IXL, the treasurer was authorized to use Quickbooks software to print club checks and deposit slips.

An item regarding the method of making Club payouts was heard. The Board reaffirmed the long standing policy on the matter.

Based on a finding of the Financial Review Committee, the topic of equipment inventory was discussed. The Secretary was asked to bring the last known equipment list to the March Board meeting.

With the business complete, on motion by KF4RTX, seconded by N4YTO, the meeting adjourned at 10:01p.

Respectfully submitted,

Jeff Wittich AC4ZO, Secretary

Board Meeting Minutes

February, 2000

The monthly Board meeting of the Raleigh Amateur Radio Society was held at the Forest Hills Baptist Church on February 15. The meeting was called to order by President Jack Ritter, W0UCE at 7:36p. Members present at that time were: W2BYV, KG4CXR, K4HF, N4IXL, AB4OZ, KO4QH, KF4RDP, WD4RDT, KF4RTX, W0UCE, N4YTO, and AC4ZO. The total attendance was 16.

On motion by N4YTO, seconded by KF4RDP, the minutes of the October 1999 meeting were approved.

W0UCE made opening comments concerning the RARS 2000 Committee, and KO4QH commented on a test session planned for March.

N4YTO gave the Treasurer's report. He said our Membership stands at 272.

KF4RTX gave the VP report. The March meeting will be the annual birthday party and awards presentation. The April meeting will be about the hamfest, and May will feature a presentation on telegraphy.

Committee Reports:

In the FM Committee report, N4IXL said that usage on .13 has been down, and that he has purchased two 6 meter radios for the purpose of constructing a 6 meter repeater. Also, there may be some repeater shuffling in the coming months to satisfy some coordination requirements. N4IXL was actioned by the President to work with W4BRB to get our outstanding bills paid concerning the repeater move.

KO4QH reported on the Education Department. She said that a CW class is planned for the Spring. It will begin on February 28, and meet on Monday and Thursday evenings for 6 weeks.

W2BYV reported on Public Service activities. He has not received any requests for service in the last 2 months. The MS Society has asked for our assistance on April 1, 8 and 9 and Raleigh, RTP, and Chapel Hill. WA2UZO will coordinate the upcoming Colitis walk. A

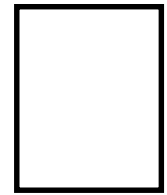
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the RARS **Exciter**

Raleigh Amateur Radio Society, Inc.
PO Box 17124
Raleigh, North Carolina 27619



Hamfest Calendar

April 2: Kinston
April 9: RARSfest, Raleigh
April 15: Morganton
May 27: Durham

courtesy of the **SERA Repeater Journal**

Fox Hunts Coming in April

Charles Scharlau NZØI

Two Foxhunts Coming to the Piedmont in April 2000

FIRST HUNT

Date: Saturday, April 1

Time: 10:00 AM to 1:30 PM

Place: Carrboro Community Park, Off of Hwy 54

This will be a great warm-up hunt for the...

SECOND HUNT

Date: Sunday, April 16

Time: 2:00 PM

Place: William B. Umstead State Park

The latest details can be found at www.qsl.net/nz0i or by contacting NZØI at nz0i@qsl.net.



Charles NZØI takes a bearing on the hidden transmitter. The real thing would be camouflaged a little better.

Some equipment will be available for loan if you don't have any DF equipment of your own.



RARSfest SOCIAL HELP NEEDED!!!

Help is needed with food for the Annual Social of the RARS Hamfest...its your call as to what you would like to contribute, but good food is needed for the evening of April 8 at the Jim Graham Building on the grounds of the NC State Fairgrounds.

Just give me a call at **872-6555** and let me know what you can provide. Everything is needed.... casseroles, vegetable dishes, salads, and deserts. Your contribution will be most appreciated.

Our social has come to be a highlight of the RARS Hamfest... an event enjoyed and really appreciated by attendees. I know we will all continue to be supportive by contributing in whatever way we can. I would also welcome your help with set up, serving, and clean up.

If you plan to bring an item other than dessert, we'll need to divide the food into two serving dishes so we have similar food items in both serving lines.

Food items should be brought to the Jim Graham Building by 6:00 p.m. on Saturday, April 8.

If I am not at home when you call, leave me a message and let me know what you can do to help.

Thanks in advance for the help I know you will give.

Mary Jo Littlewood, XYL/K4HF

Public Service Calendar

April 1: MS Walks - Cary and eastern NC
April 2: Crop Walk, Durham and Chapel Hill
April 8: MS Walk - Durham
April 9: MS Walk - Raleigh, Chapel Hill **[Hamfest!]**
May 27: Run for Research - RTP (Glaxo)
June 2-4: NC Special Olympics Summer Games



KD4ACW and KN4AQ came across these signs on ski lift support poles in Colorado.

The sign says:



No, they're not requiring a Morse test to get on the slopes... the sign refers to the *Skiier's Responsibility Code*. But that's not what it looked like the first time Gary and Cyndi saw it. The Skiier's code boils down to "Don't run into people." ■

Upgrade Fever Hits RARS

The April 15 Restructuring deadline has ignited upgrade fever in hams across the country, and right here at home. More than 35 exams were taken at the March RARS meeting. An estimated 300 were taken at the Charlotte hamfest, and the RARS VEs are bracing for a similar number at the **RARSfest**.

TAKE 5 - about 10 hams are preparing for their 5 wpm test in the RARS class, looking forward to new privileges. Charlie W4VFJ and Neal N4HAF are leading the practice sessions. **The VE's plan an extra full test session at**

the April 3rd RARS meeting, and a special code-only test at the last class on April 6th, at the Nortel Education Center. ■



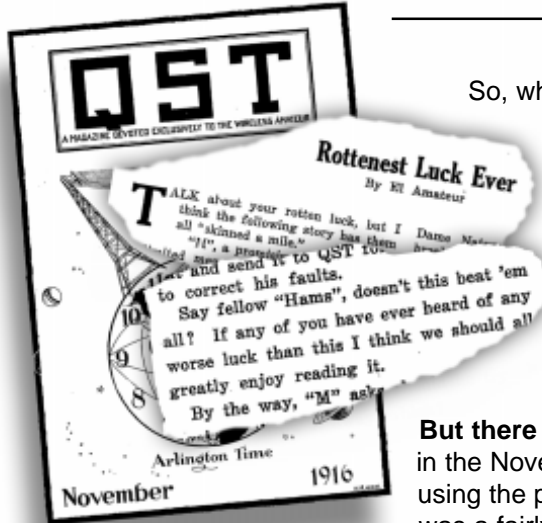
New ARRL VP John Kanode N4MM congratulates Mecklenberg ARS President Shawn Goodin K4RSG on the club's 50 years of ARRL affiliation, at the Charlotte Hamfest in March. The Kinston club reaches that milestone in April.

The **Exciter PDF Extra** contains material that wouldn't fit in the printed version of the **Exciter**, which is normally limited by printing and postage costs to 8 pages.

You may also have noticed that the PDF version of the **Exciter** is in full color, on every page. And it costs little to produce and distribute. You might want to print it out on your own inkjet, so you'll have a copy to take with you to the... library. **KN4AQ**

Where Did "Ham" REALLY Come From?

Gary Pearce KN4AQ



QST's first mention of the word "Ham" appears in this edition.

So, where did the term **Ham** really come from? In the January *President's Corner*, Jack told a story that is often repeated as fact, about the little "Hyman-Almy-Murray" station at Harvard University that saved Amateur Radio from hostile legislators in 1911. That story is told and debunked on today's Harvard Wireless Club's web site:

www.hcs.harvard.edu/~w1af/hamorigin.html.

The real truth is... nobody really knows. But the search is fascinating. There's lots of information on the web, and if there's a "smoking gun" that reveals all, it's probably hiding in an article or letter from an old telegrapher back in the 19th century.

But there are some clues. The first-ever mention of the word "Ham" in **QST** comes in the November, 1916 issue, in an article titled *Rottenest Luck Ever*, by an author using the pseudonym "El Amateur." **QST** was less than a year old at this point, and it was a fairly stuffy magazine, except for a popular series of articles under the theme *Rotten* this and *Rotten* that. The initial articles were written by ARRL founder Hiram Maxim W1AW,

disguised under the name "The Old Man." He used the articles to complain about bad operating, bad conditions, and bad luck in general. Soon the style and the "Rotten" thread were picked up by several other anonymous authors. El Amateur told a story of woe about trying to keep an antenna up and working, and concluded with the phrase "Say fellow "Hams", doesn't this beat 'em all?"

The term "Ham" pops up here and there over the next few years of **QST**, becoming increasingly common, until in November of 1923, the *Classified Advertisements* section, a **QST** staple since the first issue, took the name *Ham-Ads*.

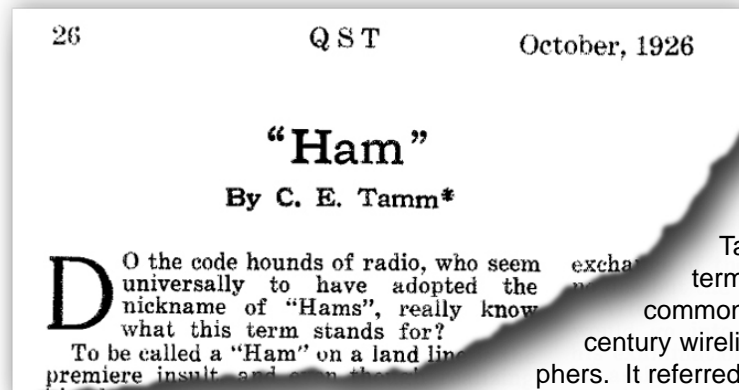
Interesting, but it really doesn't shed much light on the origin of the term. It does show that "Ham" was in popular use, at least informally, from QST's inception, if not before. But it wasn't a big enough deal to write about.

In October 1926, a **QST** article simply titled *Ham*, by



"Classifieds" changed to "Ham-Ads" in 1923, and remains that way today

C.E. Tamm (no callsign listed) of Milwaukee, Wisconsin, finally tells the story. He wrote, "Long before Marconi and DeForest had produced anything that would transmit characters without the aid of wires there were 'hams'. To the railroads goes the honor of producing the real dyed-in-the-wool 'ham.'"

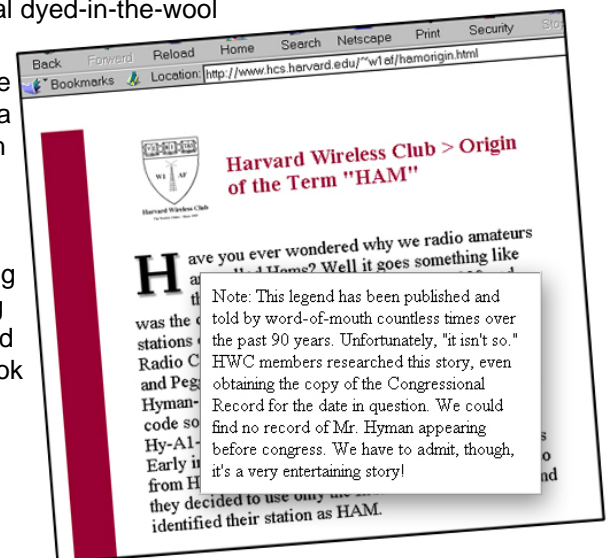


This article by C.E. Tamm says the term "Ham" began with railroad telegraphers

difficult, odd jobs for some time, looking to work their way up to the coveted job operating the key. At midnight, when the office was closed, the kids took over the wire and practiced, until one day they were good enough to take their exam. If they passed, they got the job and became telegraph operators. "Then he became, in the parlance of the commercial and railroad operators in the relay office, any number of dashed and blanked kinds of a 'HAM!'"

Mr. Tamm doesn't know why the telegraphers, an old and legendary species even back in

continued on page 11



The Harvard Wireless Club web site debunks the "H-A-M" Station story.

HAM continued from page 10

1926, called their newcomers *Hams*. The origin was already lost to time. But he explains that "it is generally conceded that the term 'Ham' was applied to the plodding student because his Morse characters sounded a great deal as if they were being formed by a huge ham instead of a hand, on the sending key." His theory is that the term simply transferred from wire to ether when radio came along.

But that leaves the term as an insult, if sometimes an affectionate one. The transformation to a term of endearment remains a missing link.

An article in the 1969 **ARRL Operating Manual** confirms the notion that *Ham* came from the wired telegraph operators. Louise Ramsey Moreau W3WRE found this definition in G.M. Dodge's **The Telegraph Instructor**, a book that predated radio:

"Ham: a poor operator. A 'plug'"

Louise adds that in the early days of radio, when a single broad spark signal occupied essentially the whole usable spectrum, and two amateurs chatting across town blocked all signals from commercial and military stations, the wire telegraphers-turned-radio operators would signal each other "SRI OM THOSE #&\$!@ HAMS ARE JAMMING YOU." She speculates that "Amateurs, possibly unfamiliar with the real meaning of the term, picked it up and applied it to themselves in true "Yankee Doodle" fashion and wore it with pride. As the years advanced, the original meaning has completely disappeared."

Perhaps. Probably. Sounds good to me. But evidently as it happened, nobody wrote it down. We may never know for sure. ■

Snapshots



More Fox Hunt Equipment - NZ0I uses this clever "offset attenuator" to reduce the signal from the Fox when working in close. Details at www.qsl.net/nz0i

League Files Partial Reconsideration Petition

ARRL Letter

The ARRL has formally asked the FCC to reconsider and modify two aspects of its December 30, 1999, Report and Order that restructured the Amateur Radio rules. The League wants the FCC to continue to maintain records that indicate whether a Technician licensee has Morse code element credit. It also seeks permanent Morse element credit for any Amateur Radio applicant who has ever passed an FCC-recognized Morse exam of at least 5 WPM.



Amateur crowned Miss Topeka 2000: Heather Hollenbeck, KBØMDX, recently was crowned Miss Topeka 2000 and will compete in the Miss Kansas 2000 pageant this June. Heather comes from a ham radio family. Proud mama is Missy Hollenbeck, AAØOF; her dad, Fred, is NØWSA; her brother, Jacob, is KBØRMK, and her granddad, Gary Hoffsommer, WØTI, introduced her to Amateur Radio.

TRIAD Spotter Training April 15



We will have our Guilford County spotter training on April 15, 2000 at Westover Church in Greensboro, NC, from 12:00 noon to a little after 2:00 PM. The session is free of charge and all are welcome to attend. For directions to Westover Church, go to www.westoverchurch.com.

For more information on Triad Skywarn, go to www.netpath.net/~skywarn.

Bill Boyes KB1G
Emergency Coordinator
Triad Skywarn



*She sells....
Hamfest Tickets!
Cyndi KD4ACW sells a ticket to the RARSfest to Carl W4EAT from a booth at the Charlotte fest. Cyndi sold about 40 tickets, a handful of tables, and signed up some commercial vendors.*